

D.P.U. 91-273

Petition of Taunton Municipal Lighting Plant for approval by the Department of Public Utilities, pursuant to G.L. c. 164, § 56D, of an Electricity Purchase Agreement between Taunton Municipal Lighting Plant and the Silver City Energy Limited Partnership.

D.P.U. 92-273 (Phase II)

Petition of Taunton Municipal Lighting Plant for approval of its 1991 Long-Range Forecast of Electricity Requirements and Resources.

APPEARANCES: Kenneth M. Barna, Esq.
Donna C. Sharkey, Esq.
Rubin and Rudman
50 Rowes Wharf
Boston, Massachusetts 02110
FOR: TAUNTON MUNICIPAL LIGHTING PLANT
Petitioner

L. Scott Harshbarger, Attorney General
By: William M. McAvoy
Walter F. McDonough
Assistant Attorneys General
Office of the Attorney General
Regulated Industries Division
200 Portland Street
Boston, Massachusetts 02114
Intervenor

Robert N. Werlin, Esq.
Keohane & Keegan
21 Custom House Street
Boston, Massachusetts 02110
FOR: SILVER CITY LIMITED PARTNERSHIP
Intervenor

William Graban, Co-Chairman
COAL-FACTS Committee
19 Scadding Street
Taunton, Massachusetts 02780

PRO SE
Intervenor

I. INTRODUCTION

A. Background

Taunton Municipal Lighting Plant ("TMLP") is a municipally-owned electric utility serving the City of Taunton ("Taunton"), the towns of Raynham and Berkley, and portions of the towns of North Dighton and Lakeville, in Bristol County. In 1994, TMLP served 30,544 retail customers (RR AG-6, at 4). In 1994, TMLP had total energy requirements of 526,862 megawatthours ("MWH") and experienced a summer system peak of about 107 megawatts ("MW") and a winter system peak of about 95 MW (RR DPU-24).

TMLP owns and operates a two-unit generating station, the Cleary-Flood station (Exh. TMLP-2, at 9). One unit is a 26 MW oil-fired steam generator ("Cleary 8") operating in a peaking mode (id.). The other unit is a 110 MW dual-fueled (oil and natural gas) combined cycle unit ("Cleary 9") operating in an intermediate mode under the dispatch of the New England Power Pool ("NEPOOL") (id.). TMLP also obtains power from various sources in New York, Maine, Vermont, Massachusetts, New Hampshire, and Canada (Exh. DPU-10).

B. Procedural History

On May 13, 1991, pursuant to G.L. c. 164, § 69I, TMLP filed with the Energy Facilities Siting Council ("Siting Council") its long-range forecast of electricity needs and requirements for the period 1990-1999. The Siting Council docketed the filing as EFSC 91-51. On December 20, 1991, TMLP filed with the Siting Council, in EFSC 91-51, an updated and supplemented forecast and supply plan, covering the forecast period 1990-1999 (Exh. TMLP-1, Vols. I & II). On May 27, 1992, the Siting Council issued a notice of adjudication that set July 6, 1992 as the date for

any person to file a petition for leave to intervene in EFSC 91-51. The Attorney General ("Attorney General") filed a notice of intervention, as of right, pursuant to G.L. c. 12, § 11E. The Hearing Officer granted the petitions to intervene filed by Silver City Energy Limited Partnership ("SCE") and COAL-FACTS, a Taunton citizen's group.

On November 27, 1991, pursuant to G.L. c. 164, § 56D, TMLP filed with the Department of Public Utilities ("Department") a request for approval of a 30 MW power purchase contract between TMLP and SCE, the developer of the Taunton Energy Center ("TEC"), a proposed coal plant to be built on property leased to SCE by TMLP. The Department docketed the contract review case as D.P.U. 91-273. No petitions to intervene were filed in the contract approval case.

Effective September 1, 1992, pursuant to legislation reorganizing the Department to include the functions of the Siting Council, the Siting Council and the Department were merged, and some of the functions of the Siting Council were assigned to the Energy Facilities Siting Board ("Siting Board").¹ As a result of the merger, the Department assumed the function of reviewing long-range plans of electric and gas companies. Following the merger, the Department redocketed EFSC 91-51, the forecast and supply plan case, as D.P.U. 92-273.

The Department consolidated the forecast/supply plan and contract cases by Order on March 30, 1993, based on its finding that the forecast/supply plan and contract approval cases involved common questions of law and fact with respect to the adequacy of resource planning and determination of resource need. The Department provided in the consolidation Order that intervenors in the forecast/supply plan case would be intervenors in the contract case and vice

¹ St. 1992, c. 141.

versa.²

At the request of TMLP, the Department canceled forecast and supply plan hearings scheduled for October 1993 in order to accommodate negotiations in Newbay Corporation, D.P.U. 88-265 (1994) ("Newbay"), which affected TMLP's supply plan (Taunton Municipal Lighting Plant, D.P.U. 91-273/92-273, Hearing Officer Ruling on Motion to Delay Hearings (October 18, 1993)). In November 1993, the Department held two days of evidentiary hearings on the demand forecast. On March 15, 1994, the Hearing Officer issued a ruling phasing the Order in the consolidated proceeding, since the outcome in the Newbay case affected the supply plan.³ The Hearing Officer Ruling indicated that Phase I of the proceeding would address TMLP's demand forecast, while Phase II would address TMLP's supply plan and the TEC contract review. On April 1, 1994, the Department held a final hearing on the demand forecast.

² On November 15, 1993, the Massachusetts Public Interest Research Group ("MASSPIRG") filed a late petition to intervene in the consolidated proceeding. MASSPIRG's petition to intervene was filed 16 months after the intervention deadline in D.P.U. 92-273 and nine months after the intervention deadline in D.P.U. 91-273. The Hearing Officer denied the petition to intervene on the grounds that MASSPIRG failed to: (1) explain how its interests were unique and could not be adequately represented by the Attorney General or COAL-FACTS, (2) explain why its petition was late-filed, and (3) demonstrate how its interest outweighed the Department's need to conduct the proceeding in a complete, efficient, and orderly fashion (Taunton Municipal Lighting Plant, D.P.U. 91-273/92-273, Hearing Officer Ruling at 6 (November 19, 1993)). MASSPIRG appealed the Hearing Officer Ruling; by Order of January 19, 1994, the Commission upheld the denial of MASSPIRG's petition.

³ On March 18, 1994, eleven municipal light departments, including TMLP, along with Newbay Corporation and the Blackstone Park Improvement Association, submitted to the Department an Offer of Settlement and Termination of Proceedings in D.P.U. 88-265. On May 2, 1994, the Department approved the Offer of Settlement. See Newbay Corporation, D.P.U. 88-265-A (1994).

On December 30, 1994, the Department issued the Phase I Order in this proceeding, which resolved the demand forecast issues of D.P.U. 92-273. Taunton Municipal Lighting Plant, D.P.U. 91-273/92-273 (Phase I) (1994) ("TMLP Phase I Order"). This Phase II Order addresses the supply plan issues of D.P.U. 92-273 and the contract which is the subject of D.P.U. 91-273.

Phase II adjudicatory hearings were held on April 12, 13, and 25, 1995. In support of its supply plan and contract, TMLP sponsored the testimony of three witnesses: Mayhew D. Seavey, a principal with Power Line Models ("PLM"), a consulting firm; Mark Cordeiro, a senior engineer with PLM; and Scott Whittemore, energy services and planning manager at TMLP.

On May 12, 1995, TMLP submitted to the Department for review under G.L. c. 164, §56D, two executed power purchase agreements between TMLP and Browning-Ferris Gas Services, Inc. ("BFI") ("BFI contracts"), for the purchase of power from two landfill gas-fired generating facilities to be located in Halifax and East Bridgewater, Massachusetts.⁴ Along with the contracts, TMLP filed a motion to consolidate the Department's review of the BFI contracts with the Department's proceedings in this docket. No opposition to this motion was filed. The Department rules on TMLP's motion to consolidate in Section I.C, below.

Subsequent to the completion of Phase II hearings, the Department issued two additional information requests to TMLP. On June 6, 1995, TMLP filed a response to Department information request 8-1, and on July 7, 1995, TMLP filed a response to Department information request 9-1. Those responses are hereby marked as Exhibits

⁴ TMLP filed with Exhibit TMLP-6 unexecuted contracts for the sale of power from the proposed Halifax and East Bridgewater landfill gas facilities. The unexecuted contracts are referred to herein as Attachments A and B to Exhibit TMLP-6. The executed contracts are referred to herein as Updates to Attachments A and B to Exhibit TMLP-6.

DPU-8-1 and DPU-9-1, respectively, and are hereby moved into evidence. The Phase II evidentiary record includes 140 Department exhibits, seven TMLP Exhibits, one Attorney General exhibit, seven exhibits submitted by COAL-FACTS, 43 responses to Department record requests, and 12 responses to Attorney General record requests.

TMLP filed an initial brief on the supply plan and the contract review on May 23, 1995. The Attorney General filed an initial brief on the supply plan and contract review on May 31, 1995. TMLP filed a Reply Brief on June 6, 1995. The Attorney General filed a response to the TMLP Reply Brief on June 12, 1995.

C. Motion to Consolidate Proceedings

In this section, the Department addresses TMLP's pending Motion to Consolidate Proceedings, discussed in Section I.B above. Pursuant to 220 C.M.R. § 1.09, the Department upon its own motion, or upon motion by a party or other person joined in the proceeding, may order proceedings involving a common question of law or fact to be consolidated for hearing on any or all of the matters in such proceedings. Here, TMLP seeks to consolidate the Department's review of the BFI contracts with the review of TMLP's supply plan and TEC contract in this docket.

TMLP noted that it had submitted unexecuted copies of draft BFI contracts to the Department on March 16, 1995, in order for the Department to review the planned purchases as part of TMLP's supply plan, and that these draft contracts were the subject of cross-examination and discovery during the Phase II hearings. TMLP also noted, however, that in the executed BFI contracts all dates were replaced by the corresponding date one year later. Other than the date

changes and the identity of the seller of power from the East Bridgewater facility,⁵ the provisions of the previously submitted, unexecuted BFI contracts are identical to those in the final, executed contracts filed on May 12, 1995 (see Exh. TMLP-6, Atts. A and B, and Updates to Atts. A and B).

The Department's standard of review in a contract proceeding under G.L. c. 164, § 56D, requires examination of some issues that are similar to those in a review of a supply plan under G.L. c. 164, § 69I. For example, the Department reviews, among other things, whether a contract filed under Section 56D is consistent with a current, approved forecast and supply plan; or if it is the result of a current competitive solicitation open to all bidders; or if it is supported by a demonstration of economic superiority using current supply- and demand-side alternatives. Chicopee Municipal Lighting Plant, D.P.U. 94-26, at 2-3 (1995) ("Chicopee"); Newbay, above. All of the above involve least-cost considerations, which are a focus of the Department's review of an electric company's supply plan. See Section II.D, below, and Braintree Electric Light Department, D.P.U. 93-196, at 10-36 (Phase II) (1995) ("1995 BELD Decision"); Eastern Edison Company and Montaup Electric Company, D.P.U. 92-214, at 42-62 (1993) ("1993 EUA Decision"); Braintree Electric Light Department, 24 DOMSC 1, at 46-68 (1992) ("1992 BELD Decision"). Thus, the cost of the BFI contracts relative to other supply resources is an issue common to both the contract review and the supply plan review in Phase II of this

⁵ The developer of the East Bridgewater facility and seller of the power generated therefrom was identified as Northern Disposal, Inc. in the unexecuted copy of the contract filed on March 16, 1995 (see Exh. TMLP-6, Att. B). The developer/seller identified in the final, executed copy of the contract is BFI (see Exh. TMLP-6, Update to Att. B). As discussed in footnote 53, below, the change in dates affects the economics of the BFI contracts.

case.

The Department notes that no other party has opposed TMLP's motion. Given that a record has already been developed in this proceeding regarding the BFI contracts; that the provisions of the unexecuted contracts and the executed contracts remained the same but for the in-service dates, milestone dates, and the identity of the seller of power from the East Bridgewater facility; and that the Department's review in both proceedings focuses on least- cost considerations, the Department finds that the review of the BFI contracts in TMLP's supply plan proceeding and the review of the BFI contracts under G.L. c. 164, § 56D, involve common questions of law and fact. Thus, pursuant to 220 C.M.R. § 1.09, the Department hereby grants TMLP's motion to consolidate the Department's review of the BFI contracts with this proceeding.

II. SUPPLY PLAN REVIEW

A. Standard of Review

In accordance with the mandate in G.L. c. 164, § 69H, to "provide a necessary energy supply for the commonwealth with a minimum impact on the environment at the lowest possible cost," the Department reviews two dimensions of TMLP's supply plan: cost and adequacy. See G.L. c. 164, § 69I.

The Department has interpreted this mandate to require an electric company to demonstrate that a supply plan minimizes the cost of power (that is, whether it ensures least cost supply) subject to balancing adequacy, diversity, and environmental impacts of construction and operation of facilities. 1995 BELD Decision at 5; 1993 EUA Decision at 35; 1992 BELD Decision, 24 DOMSC at 35. In order to determine whether an electric company's supply plan minimizes the cost of power, the Department reviews an electric company's supply planning methodology and processes of identifying and evaluating a variety of supply options. 1995 BELD Decision at 5; 1993 EUA Decision at 35-36; 1992 BELD Decision, 24 DOMSC at 35. An electric company must demonstrate that it has identified a reasonable range of resource options by (1) compiling a comprehensive array of available resource options, and (2) developing and applying appropriate criteria for screening its array of available resource options. 1995 BELD Decision at 5-6; 1993 EUA Decision at 36; 1992 BELD Decision, 24 DOMSC at 35. In reviewing an electric company's resource evaluation process, the Department determines whether (1) that company fully evaluated all resource options, including the treatment of all resource options on an equal footing, and (2) applied its resource evaluation process to all of its identified

resource options. 1995 BELD Decision at 6; 1993 EUA Decision at 36; 1992 BELD Decision, 24 DOMSC at 35.

The adequacy of supply is an electric company's ability to provide sufficient capacity to meet its peak loads and reserve requirements throughout the forecast period. 1995 BELD Decision at 4; 1993 EUA Decision at 35; 1992 BELD Decision, 24 DOMSC at 34. Further, different standards of review are appropriate for evaluating supply adequacy in the short- and long-run. 1995 BELD Decision at 4; 1993 EUA Decision at 35; Commonwealth Electric Company and Cambridge Electric Light Company, 15 DOMSC 125, at 134 (1986).

In order to establish adequacy in the short run, an electric company must demonstrate that it has an identified, secure, and reliable set of energy and power supplies sufficient to meet its NEPOOL capability responsibility⁶ under a reasonable range of contingencies, or that it operates pursuant to a specific action plan which allows it to rely upon alternative supplies in the event of certain contingencies. 1995 BELD Decision at 4-5; 1993 EUA Decision at 35; 1992 BELD Decision, 24 DOMSC at 34. In order to establish adequacy in the long run, an electric company must demonstrate that its supply planning process can identify and fully evaluate a reasonable range of resource options on a continuing basis while allowing sufficient time for the company to make appropriate supply decisions to ensure adequate, cost-effective energy and power resources over the forecast period. 1995 BELD Decision at 5; 1993 EUA Decision at 35;

⁶ For an industry-accepted definition of NEPOOL capability responsibility, see New England Power Pool Agreement at Sections 15.26 and 15.27. "NEPOOL Capability Responsibility for any month is the lesser of (i) NEPOOL Objective Capability for the month, and (ii) the minimum NEPOOL Capability during such month." Id. at Section 15.26.

1992 BELD Decision 24 DOMSC at 34-35.

B. Previous Supply Plan Review

In Taunton Municipal Light Plant, 15 DOMSC 169 (1986), the Siting Council approved the 1984 Forecast Supplement of TMLP subject to three supply plan conditions, Conditions 3, 4 and 5, as follows:

3. TMLP shall provide on or before December 15, 1986, a progress report on its efforts to sign new capacity sales agreements for Cleary 9. TMLP also shall provide a full update in its next filing.
4. TMLP shall provide in its next filing an update on plans of local customers to implement cogeneration, and a discussion, with recommendations, of alternative contractual or power purchasing schemes (including pricing mechanisms) for encouraging economic purchases of customer-owned generation.
5. TMLP is required to report in its next filing on its progress and/or plans regarding appliance-use surveys and is required to demonstrate its consideration of conservation and load management strategies as part of an integrated supply planning approach in all of its future filings.

Taunton Municipal Lighting Plant, 15 DOMSC 169, 185-186 (1986).

The Department notes that the filing referred to by the Siting Council in the above conditions was submitted by TMLP on April 1, 1987. The Siting Council did not issue a decision with regard to the 1987 filing. Nonetheless, Conditions 3, 4 and 5 relate to supply planning purposes that are of continuing relevance to TMLP, and are not time-sensitive to a degree that would preclude meaningful review by the Department in this proceeding. Therefore, the Department reviews TMLP's compliance with Conditions 3, 4 and 5 in light of the record in this proceeding.

With respect to Condition 3, regarding Cleary 9 sales, TMLP indicated that its supply plan

currently incorporates long-term contractual arrangements that provide for the direct sale of approximately 25 percent of the 110 MW capacity of the Cleary 9 unit, and the sale of another 13 percent of the Cleary 9 capacity under an exchange agreement (Exh. TMLP-1, Vol. 2 ("Exh. TMLP-1"), at 8). TMLP also indicated that, in years when new projects which have recently come on line initially provide the system with excess capacity, the Company makes short-term sales of system power in the wholesale market (Exh. DPU-7-15; Tr. 1, at 44-50, and Tr. 3, at 5-9).⁷ Accordingly, based on the foregoing, the Department finds that TMLP has complied with Condition 3.

With respect to Condition 4, regarding cogeneration and customer-owned generation in TMLP's territory, TMLP provided information on its efforts to implement such resource capabilities (Exhs. DPU-5-2 and TMLP-1, at 10).⁸ TMLP stated that its rates are among the lowest in Massachusetts and the region, which is a factor for customers who might otherwise find economic value in developing generation (Tr. 3, at 13). Accordingly, the Department finds that TMLP has complied with Condition 4.

With respect to Condition 5, regarding appliance use surveys and consideration of demand-side management ("DSM") as part of an integrated supply planning approach, TMLP

⁷ TMLP indicated that the operating performance of Cleary 9 and other units has qualified TMLP for significant benefits in NEPOOL's determination of TMLP's capability responsibility under the NEPOOL Performance Incentive Program (Exh. DPU-7-15).

⁸ TMLP reported that it relied on 1.8 MW of customer-owned generation to meet its 1994 summer peak day load, and further reported that TMLP initiated and sought funding for two demonstration photovoltaic projects as part of the Massachusetts Photovoltaics for Utilities working group (Exhs. DPU-5-2 and TMLP-5, at 3).

stated that DSM now is an integral and integrated part of its least-cost plan (Exh. TMLP-1, at 10) (see Section II.D., below). Mr. Seavey testified that TMLP has implemented all cost-effective DSM programs in its supply plan, and that its programs showed post-audit actual savings in 1994 that were 85 percent of the forecasted DSM reduction for that year (Tr. 2, at 31; Tr. 3, at 133). Accordingly, the Department finds that TMLP has complied with Condition 5.

C. Supply Planning Process

TMLP stated that it uses a planning process which enables it to identify and evaluate a reasonable and comprehensive range of demand- and supply-side options on an equal basis (Exhs. TMLP-1, at 17, and TMLP-5, at 11). TMLP stated that it employs a parallel process to identify and evaluate DSM and supply-side options (Exhs. TMLP-1, at 20, and TMLP-5, at 13). TMLP indicated that its resource planning process is designed to achieve resource diversity and minimize risk, as well as to minimize cost (Exh. TMLP-5, at 15-17).

TMLP stated that it has developed an integrated least cost planning methodology, consisting of a series of computer models which draw from a common data base of cost, economic, system and other characteristics (Exh. TMLP-1, at 17). The Company explained that, in order to determine the appropriate resources, it utilizes the following models: an energy and peak load forecasting model,⁹ a capacity expansion model,¹⁰ the POWRSYM production costing

⁹ The Company uses the energy and peak load forecasting model, which is an econometric model, to forecast TMLP's future energy requirements and system peak demand (Exh. TMLP-1, at 21).

¹⁰ The capacity expansion model utilizes annual load duration curves to approximate TMLP's load and calculate the production cost and revenue requirements of TMLP generation under a particular long-range resource plan (Exh. TMLP-1, at 23). The model incorporates the capacity and transmission costs of each generating resource and

model,¹¹ and a revenue requirements model¹² (id. at 17-21; Exh. TMLP-5, at 11-14).

TMLP stated that it uses its energy and peak load forecasting model (see TMLP Phase I Order) and its capacity expansion model to develop an Initial Resource Plan (Exh. TMLP-1, at 17, 19). TMLP explained that, after developing projections of capability responsibility, comparing those to existing resources, and incorporating information on costs of existing resources and generic new capacity, it runs the capacity expansion model in order to optimize the resource mix and produce an Initial Resource Plan which shows the lowest total revenue requirement (id.).

TMLP next conducts a screening analysis to identify and compare a reasonable and comprehensive range of specific DSM and supply-side options to meet its energy and peak load requirements (id. at 22). Using parallel DSM and supply-side screening models, TMLP ranks the options according to both price and non-price criteria (id.). TMLP then uses the capacity

is able to calculate the trade-offs between base/intermediate and peaking resources, addressing fixed and variable cost attributes of those resources (id.).

¹¹ The POWRSYM model is a chronological probabilistic production costing model (Exh. TMLP-1, at 25). TMLP stated that, because the POWRSYM model uses a chronological representation of a system rather than equivalent load duration curves, it correctly models generator operating characteristics, such as minimum start-up, run-time and down-time constraints, and it accurately models the economic benefits of DSM resources, such as load control (id.).

¹² The revenue requirements model is a detailed financial projection of TMLP's revenue requirements including non-power costs (Exh. TMLP-1, at 26-27). TMLP's operating expenses are projected by regression analysis incorporating appropriate independent variables such as number of customers and amount of sales, and plant-in-service is projected using TMLP's current capital budget and historic averages of normal additions by plant type (id.). Depreciation expense, return on investment, and payment in lieu of taxes are projected based on TMLP's policies, adjusted to keep future cash balances in line with historic values (id.). Debt service is based on actual debt service schedules (id.).

expansion model to re-optimize the resource mix, with inclusion of resource plan increments based on the ranked resource options (id. at 22-23).

After the capacity expansion model has been used to determine the Initial Resource Plan, and subsequent plans including one or more of the ranked DSM and supply-side options, TMLP uses the POWRSYM and revenue requirements models to develop further the total revenue requirements of the Initial Resource Plan and subsequent plans (id. at 24-25). TMLP indicated that it successively adds ranked options to the Initial Resource Plan until adding such options provides no further economic benefit, noting that economic benefit was measured by indicators such as benefit/cost ratio, breakeven and payback periods, and aggregate cost differential (id. at 25). TMLP stated that if the options, either individually or grouped, reduce the system's revenue requirements, they are incorporated into TMLP's Integrated Least Cost Resource Plan (id. at 26).

D. Least-Cost Supply

In this section, the Department reviews TMLP's process for identifying and evaluating future resource options to determine whether TMLP's supply plan ensures a least-cost energy supply. TMLP asserted that it has developed a planning process which identifies and evaluates a comprehensive array of demand-side and supply-side options on an equal basis (Exh. TMLP-5, at 11). TMLP maintained that its methodology identifies a reasonable range of options, screens them in a neutral and objective manner, and analyzes them using sensitivity analyses, in order to develop an adequate and least-cost resource plan (id.).

1. Identification of Resource Options

TMLP identified for consideration several types of supply-side options and an array of DSM resource options. The Department focuses its review in this section on whether TMLP examined a reasonable range of resources to meet its projected capability responsibility by (1) compiling a comprehensive array of available resource options and (2) developing and applying appropriate criteria for screening its array of available resource options.

a. Available Resource Options

In order to determine whether TMLP compiled a comprehensive array of available resource options, the Department must determine whether TMLP compiled adequate sets of available resource options for each type of resource identified during this proceeding.

i. Types of Resource Sets

TMLP identified three types of resource sets for consideration in the supply planning process: (1) purchases of power from non-utility generators ("NUGs"), including, among others, TEC's coal-fired project at TMLP's own site and two BFI landfill gas projects in adjacent towns; (2) purchases of power from other utilities, including a contract with New England Power Company ("NEP"); and (3) DSM options (Exh. TMLP-5, at 4-9). The Department finds that TMLP has identified a reasonable range of resource sets.

ii. Compilation of Resource Sets

TMLP compiled its set of supply-side resources primarily by using Requests for Proposals ("RFPs"). As a result of its 1989 coal-only RFP, TMLP agreed in January 1991 to purchase power from TEC (Exh. DPU-14). As a result of subsequent RFPs in 1990 and 1992, TMLP

received numerous additional options, including about 30 offers from utilities and about 20 offers from NUGs (Exhs. TMLP-1, at 80-82; DPU-34, at 6-13). A partial listing of offers from individual units in the 1990 RFP totalled approximately 3,000 MW (Exh. TMLP-1, at 76). TMLP stated that, since 1992, it has received and considered further offers, principally from utilities, to sell it power for various lengths of time, at competitive prices (Tr. 2, at 3-4). These utility offers included system power and power from individual units, as well as offers for baseload, intermediate, and peaking power (Exhs. DPU-34 and TMLP-1, at 76-82). Since TMLP has considered a wide range of potential power purchases from NUGs and utilities, including sources with several fuel types, duty types, and diverse geographical locations, the Department finds that TMLP has compiled an adequate set of supply-side resources.

TMLP stated that it identified 27 technologies for consideration in its DSM resource set study (Exh. TMLP-1, at 30). These included 16 residential technologies and eleven commercial/industrial ("C/I") technologies (id. at 35). Among the technologies were ten involving insulation and building shell measures; four employing energy storage; three each involving lighting, direct load control, and efficiency improvements to various kinds of equipment; and four others (id.). The Department notes that TMLP's set of DSM technologies is very similar to the range of technologies actually implemented by other electric utilities in Massachusetts. In that TMLP has examined a substantial number of DSM technologies for its resource set, and has considered technologies actually in use by other utilities in the area, the Department finds that TMLP has compiled an adequate set of DSM resources.

iii. Conclusion on Available Resource Options

The Department has found that TMLP has identified a reasonable range of resource sets. The Department has also found that TMLP has compiled an adequate set of supply-side resources and DSM resources. Accordingly, the Department finds that TMLP has compiled a comprehensive array of available resource options.

b. Development and Application of Screening Criteria

To determine whether TMLP developed and applied appropriate criteria for screening its array of available resource options, the Department reviews the criteria that were developed and applied to TMLP's identified resource sets, including sets of supply-side and demand-side options.

In general, TMLP's screening process considered price and non-price aspects of available resource options (Exh. TMLP-1, at 44, 80). TMLP asserted that its most important criterion was price, and that it gave the same 65 percent weight to economic factors for both supply-side and demand-side options (*id.* at 7; Exh. DPU-6-2).¹³ TMLP applied several non-price criteria to both DSM resources and generation resources¹⁴ (Exh. TMLP-1, at 44, 80). TMLP stated that, for each criterion, it scored options by awarding the maximum points to the best project, no points to the worst, and intermediate scores to the remaining options¹⁵ (Exhs.

¹³ The Department notes that the economic criteria employed by TMLP appear to account for 55 percent of the overall screening criteria and not 65 percent.

¹⁴ TMLP identified eight non-price criteria for DSM options, including technical risk, quality impacts, reliability, development status, training and education, engineering, payback time, and administrative costs (Exhs. TMLP-1, at 44; and DPU-6-2). TMLP identified nine non-price criteria for generation options, including permitting, site, fuel supply, financing, interconnection, steam contract, proven technology, developer experience, and operator experience (Exhs. TMLP-1, at 80; and DPU-6-2).

TMLP-1, at 70-71, and DPU-6-14).

i. Supply-Side Resources

For supply-side screening, TMLP developed four groups of criteria: (1) price; (2) economic confidence; (3) project viability; and (4) other (Exh. TMLP-1, at 70). The two price criteria (45 percent of the total possible points) were revenue requirements, accounting for 35 percent, and the amount of front loading (payments above projected avoided cost in the early years of a project), accounting for ten percent (id.). The five economic confidence criteria (10 percent of the total), each weighted equally, included security for front loading, an option for equity participation, an option for buyout of the contract, fuel pricing methodology, and completion security based on reaching scheduled milestones (id.). The nine equally weighted project viability criteria (35 percent of the total) included permitting status, site acquisition, fuel supply, financing status, interconnection agreement status, steam contract status, proven technology, developer experience, and operator experience (id.). The three other criteria (10 percent of the total) were dispatchability, fuel diversity, and transmission access (id.).

TMLP applied these criteria in screening the results of its 1990 and 1992 RFPs (id. at 80-82; Exh. DPU-34, at 6-13). Overall scores from the 1990 RFP, for 16 bids plus the TEC project, on a scale from zero to ten, ranged from 8.7 to 2.1 (Exh. TMLP-1, at 80-82). TEC was rated the highest at 8.7, while the next highest rating was 7.3 (id.). From the 1992 RFP, overall scores for 43 bids ranged from 9.3 to 4.4 (Exh. DPU-34, at 6-13). TEC again was rated the highest at 9.3,

¹⁵ TMLP indicated that intermediate scores of remaining options were assigned on a linear scale relative to the difference between the best and the worst projects (Exhs. DPU-6-14 and TMLP-1, at 71).

followed by two projects with overall scores of 9.1 (id.).

TMLP stated that the BFI contracts were screened against projects from the 1992 RFP (Exh. DPU 7-25). TMLP's screening indicated a positive benefit/cost ("B/C") ratio for this project, in contrast to most projects associated with the 1992 RFP (id.). In addition, TMLP stated that it has received approximately ten offers per year to sell intermediate- and long-term power since its 1992 RFP, and that it continues to evaluate these new offers (Tr. 2, at 3-4; Exh. AG 1-1).

The record demonstrates that TMLP's supply-side screening criteria consist of a wide variety of price and non-price factors that evaluate the major attributes of particular resources. The record indicates that TMLP applied its screening criteria to projects proposed via its 1990 and 1992 RFPs. The Department notes that the TEC and BFI projects were ranked according to these same criteria. Accordingly, based on the foregoing, the Department finds that TMLP has developed and applied appropriate criteria for screening its set of supply-side resources.

ii. Demand-Side Resources

TMLP screened DSM resources by ranking them according to five groups of criteria, comprising 25 criteria in all (Exh. TMLP-1, at 32). Six load shape criteria (15 percent of the total possible points) included peak clipping, valley filling, load shifting, strategic conservation, strategic load growth, and flexible load shape (id.). The three cost and benefits criteria (10 percent of the total) were payback time, return on investment, and cost per kilowatthour ("KWH") saved (id.). The seven customer criteria (27 percent of the total) were economic risk, technical risk, financial risk, ability to pay, reliability, size of investment for a customer, and

quality of impact on customers (id.). The four implementation criteria (21 percent of the total) were development status, training and education required, engineering, and administrative costs (id.). The five utility criteria (27 percent of the total) were peak impacts in winter and summer, energy impacts in winter and summer, and relative costs (id.). TMLP claimed that 65 percent of the total possible points relate to price, including the load shape criteria, the utility criteria, four customer criteria, return on investment, and cost per KWH saved (Exh. DPU 6-2).

TMLP applied its criteria to obtain overall scores ranging from 7.3 to 2.0 for its 27 DSM resources (Exh. TMLP-1, at 35). TMLP chose the nine highest-rated DSM resources for further economic and technical analyses (id. at 43). These were water heater blankets, pool pump controls, air conditioner controls, water heater controls, efficient residential lighting, efficient C/I lighting, efficient variable speed motors, efficient constant speed motors, and high efficiency room air conditioning (id.).

The record shows that TMLP's DSM screening criteria account for a wide variety of price and non-price factors that affect the desirability of implementing a particular DSM resource. The Department recognizes that TMLP applied its screening criteria to 27 DSM resources covering all customer classes. Accordingly, based on the foregoing, the Department finds that TMLP has developed and applied appropriate criteria for screening its set of DSM resources.

c. Conclusions on Identification of Resource Options

The Department has found that TMLP (1) compiled a comprehensive array of available resource options and (2) developed and applied appropriate criteria for screening supply-side and DSM resource options. Accordingly, the Department finds that TMLP has identified a reasonable

range of resource options.

2. Evaluation of Resource Options

a. Evaluation Process

The Department reviews TMLP's resource evaluation process to determine whether TMLP (1) has developed a resource evaluation process that fully evaluates all resource options and treats all resource options on an equal footing, and (2) has applied its resource evaluation process to all of the resource options identified in Section II.D.1., above.

In the past, a company's resource evaluation process has been reviewed in terms of its ability to reflect an adequate consideration of cost, risk minimization and diversity objectives. 1995 BELD Decision at 21; 1993 EUA Decision at 51; 1992 BELD Decision, 24 DOMSC at 56. In addition, the Department and the Siting Board have an obligation to balance economic considerations with environmental impacts in ensuring that the Commonwealth has a necessary supply of energy. G.L. c. 164, §§ 69H, 69I. Thus, in this section, the Department considers the extent to which TMLP incorporates cost, risk minimization and diversity objectives, and environmental impacts in its supply planning process.

b. Cost

i. Description of TMLP's Process

TMLP incorporated the cost of supply- and demand-side options into its evaluation process through the design of its RFPs and its initial screening criteria (Exh. TMLP-1, at 4-7, 19). TMLP ranked supply- and demand-side proposals based on their prices, as reflected in their effects on the Company's revenue requirements (id. at 19-27, 43, 73, 88). TMLP employed its

resource evaluation process several times after filing its resource plan with the Department, updating the results on several occasions, and revising the resource plan four times¹⁶ (Exhs. DPU-34, DPU 1-17, and TMLP-5, at 4-8; RRs DPU-37, DPU-41, and DPU-43).

As described in Section II.C., above, TMLP begins its analysis with an initial optimized least-cost resource plan, developed by including generic generating units as needed, and then refines its resource plan by incorporating actual resource options in place of the generic options in the initial plan (Exh. TMLP-1, at 17-21). TMLP asserted that its planning methodology allows it to estimate the optimum annual purchase amounts, using its capacity expansion model, which are then refined using the results of the more detailed production costing model (*id.* at 22-27). TMLP reported that it selects an option as part of its resource plan only if its analysis determines that the option is least-cost, noting that the final decision variable for its resource planning process is the ratepayer benefit in the form of reduced revenue requirements (*id.* at 18, 21, 87-88).

To select its integrated least-cost resource plan, TMLP explained that it first developed a tentative plan consisting of a least-cost supply option and all DSM options individually demonstrating a B/C ratio greater than 1.0, entered in the order in which the options passed the screening analysis (*id.* at 22-23, 87-88). TMLP reported that the testing process to determine the final least-cost resource plan consisted of removing the resource with the lowest B/C ratio and recalculating the total system revenue requirements for the revised tentative least-cost resource plan, until the lowest revenue requirement is achieved (*id.* at 87-88).

¹⁶ The revisions included (1) substitution of a 10 MW purchase from NEP in place of a 10 MW purchase from the proposed Newbay project, (2) selection of two 3.8 MW purchases from BFI landfill gas units, and (3) two adjustments to the projected in-service date of the TEC project, until 1998 and then 2000 (Exh. TMLP-5, at 4-8).

TMLP claims that it has consistently used this same process since its 1991 filing, that the process treats supply-side and DSM resources consistently, and that this process minimizes the costs to its ratepayers (TMLP Brief at 21-24).

(A) Supply-Side Resources

The Company analyzed supply-side (and demand-side) options in terms of total revenue requirements, savings, cost, B/C ratio, breakeven period, payback period, and the aggregate differential which would result from each supply plan scenario (Exh. TMLP-1, at 88). TMLP explained that the total cost of each supply option was derived from capacity, energy, and transmission costs (id. at 7, 19).

TMLP explained that its production costing model projects energy costs only, that capacity costs are added externally, and that other non-power costs are derived through the revenue requirements model (id. at 22, 26-27).

TMLP indicated that the assumptions used to project future revenue requirements incorporated fuel price and load growth assumptions derived from fuel forecasts and economic indicators (id. at 91). The Company based its estimated costs of generic new base/intermediate combined cycle and peaking combustion turbines on NEPOOL's Summary of Generation Task Force ("GTF") Long-Range Study Assumptions (id. at 40). TMLP conducted an optimization analysis which calculated the MW amount which best met TMLP's capacity requirements and minimized total bulk power supply costs (id. at 23-24).

TMLP stated that the TEC project, which won TMLP's 1989 coal-only RFP, consistently emerged as least-cost from TMLP's screening and evaluation processes in repeated re-

examinations over the next several years, and therefore was included as the primary supply-side proposal in TMLP's resource plan (Exh. TMLP-5, at 17-20). As part of these re-examinations, TMLP compared the costs of the TEC project (in 5 MW increments up to 30 MW) with the six top-ranked bids from the 1990 RFP and later with six of the top-ranked bids¹⁷ from the 1992 RFP (Exhs. TMLP-1, at 83-86, and DPU-17). In early 1995, the Company updated its least-cost resource plan to include the pair of BFI projects (Exh. TMLP-5, at 4). TMLP presented analyses of the costs of the TEC project, with a new and lower price,¹⁸ and the BFI projects, showing substantial cost savings compared to identified alternatives (id.; RR-DPU-41). TMLP stated that the Department had found that the NEP agreement was competitively priced, based on current market conditions, and that TMLP would save millions of dollars compared to the cost of the Newbay contract (Exh. TMLP-5, at 5, citing D.P.U. 88-265-A at 9-10).

TMLP also contends that its policy of buying and selling capacity in the short-term and long-term markets allows it to better match capacity with current demand, in order to minimize cost (TMLP Brief at 25, citing Tr. 1, at 45-56, and Exhs. DPU 6-9 and DPU 7-15).

(B) Demand-Side Resources

TMLP stated that the total cost of each DSM option consisted of hardware, labor, and

¹⁷ The six bids included three of the four top-ranked offers from utility-owned units, the top-ranked offer for utility system power, the top-ranked offer from a NUG, and the top-ranked offer for peaking power (Exhs. DPU-17 and DPU-34).

¹⁸ SCE's most recent price offer for TEC, in April 1995, is less than half the original price (Exh. DPU-14, at App. H; RR-DPU-37). A March 1995 price offer is about half the original price (Exhs. DPU-14, at App. H; and DPU-3-7).

administrative costs (Exh. TMLP-1, at 38). TMLP performed system-specific economic analyses of its DSM options in sequence, beginning with the option with the highest overall ranking from its screening process (id. at 34). To calculate the cost of the DSM options, TMLP's analyses used system-specific information on the technical potential of each DSM option, the penetration rates in TMLP's service area, and the impacts of the various options on TMLP's overall load shape by time of use (id. at 34-35).

TMLP estimated the technical potential of DSM programs in its commercial and industrial sectors by using data from the Electric Power Research Institute to estimate the level of electric consumption by end use within each of its commercial and industrial Standard Industrial Classification codes (id. at 35-37). For the residential sector, end-use specific data was derived from company records, TMLP's Energy Savings Plan, and information available through the state's Residential Conservation Service (id. at 35-36). TMLP stated that it then estimated the likely impact from individual DSM options for each end use and thus derived the technical potential for residential energy and peak demand reductions (id. at 37).

TMLP stated that it estimated the annual penetration rates for each option based upon information obtained from other utilities and TMLP's experience (id. at 37-38). TMLP derived load shape data for various end uses from vendors, journals, and other utilities (id. at 38). The Company explained that the annual penetration rates were combined with the technical potential of each option, adjusted for the end use's contribution to the overall load, to develop estimates of the annual and cumulative energy and peak demand reductions (id.).

To develop hardware costs, TMLP indicated that it obtained actual price data from

vendors, technical journals, and TMLP's own experience (id.). Finally, administrative and labor costs were based on TMLP's experience in implementing its DSM measures (id.).

TMLP added to its resource plan the six DSM resources for which it found B/C ratios greater than 1.0 (id. at 39, 43). The selected DSM resources, with B/C ratios ranging from 5.16 to 1.07, were (in order from the highest B/C ratio) (1) water heater blankets, (2) pool pump controls, (3) efficient residential lighting, (4) efficient C/I lighting, (5) air conditioner controls,¹⁹ and (6) water heater controls (id. at 88). TMLP projected reduced revenue requirements of about \$7 million from implementation of these six DSM options (id.).

TMLP has actually implemented and plans to implement further the DSM resources which it found to be cost-effective (Exh. DPU 7-10). In particular, TMLP has provided participating customers with water heater blankets since 1988, and efficient lighting since 1989 for homes and 1990 for businesses (id.). TMLP's budget and savings projections include controls on air conditioning, pool pumps, and water heaters starting in 1996 (id.).

ii. Attorney General's Position

The Attorney General contends that TMLP's evaluation of cost is flawed because it selected TEC, which he claims may well not be least-cost (Attorney General Brief at 6-7). He asserts that TEC has several defects, including being the result of a coal-only RFP (id. at 6-10). Focusing on the March 1995 price offer, the Attorney General argues that the TEC contract is risky because the cumulative present value of the contract would not turn positive until its

¹⁹ Controls on equipment such as water heaters and air conditioners enable the utility to automatically turn the affected equipment off (or on), when a signal is transmitted by the utility company during hours when there is a high demand for power.

eleventh year, which is actually outside the forecast period (id. at 6, citing Tr. 2, at 58). Also noting that TEC would not produce annual savings until its fifth year, or 2005, he asserts that there is no way to know if a project will actually be cost-effective in the future, citing past errors in judging cost-effectiveness (id. at 6-7, citing Tr. 3, at 65, and Western Massachusetts Electric, D.P.U. 84-25, at 13 (1984)). He argues that TMLP should increase its DSM programs, in order to avoid dependence on energy from TEC that may not be reliable or cost-effective (id. at 7).

iii. Analysis and Findings

TMLP's methodology involves a full analysis of the costs of both supply- and demand-side resources, utilizing a series of models that address both the optimum amount of needed resources and the revenue requirements for each resource. For supply-side resources, the Company developed costs based on commonly accepted fuel forecast and economic indicators coupled with GTF assumptions. Moreover, TMLP has used three supply-side RFPs to test the market.²⁰ For DSM cost estimates, TMLP estimated the technical potential, penetration rate, effect on load, and program cost of each DSM measure in a methodical, iterative fashion. In developing its least-cost resource plan, the Company detailed the present value of total revenue requirements for both supply- and demand-side options. Previously, the Department has accepted the use of production cost models such as those utilized by TMLP to determine optimum purchase amounts at the least cost. 1995 BELD Decision at 27; 1993 EUA Decision at 58. TMLP has in fact chosen and implemented resource plans which involve substantial amounts of demand-side and supply-side

²⁰ With regard to the 1989 coal-only RFP, the Department notes that TMLP has since compared TEC to projects with other fuel types and indicated that three later price offers from TEC are cost-effective, first with respect to projects from 1990 and 1992 RFPs and later with respect to some current alternatives.

resources, which suggests that TMLP has treated these resources on an equal basis. Moreover, TMLP has shown flexibility in using its cost evaluation process repeatedly to update and revise its least-cost resource plan, demonstrating consistent adherence to its resource evaluation process.

Because the Attorney General's concerns about the cost-effectiveness of the TEC contract address particulars of TEC's price rather than TMLP's supply planning methodology, the Department finds it appropriate to address these concerns in its review of the TEC contract, in Section III.B., below.

Accordingly, based on its analysis of TMLP's supply planning methodology, the Department finds that TMLP's methodology for evaluating resource options adequately considers the objective of cost.

c. Risk Minimization

An electric company's resource planning process may address risk in a number of ways. In previous cases, electric companies have addressed minimization of risk by various means, such as: (1) incorporating multiple scenarios into their demand forecasts to address uncertainty in the need for new supplies; (2) formulating action plans to address supply contingencies; or (3) minimizing financial risk through transactions with third parties. 1995 BELD Decision at 28; 1993 EUA Decision at 60; Boston Edison Company, 18 DOMSC 201, at 271-272, 277-279 (1989) ("1989 BECo Decision"). The Department notes that risk minimization is a broad topic encompassing numerous approaches. The Department recognizes that flexibility and diversity are relevant components of risk minimization, since the evaluation of these attributes can enhance a company's risk minimization methodology. Therefore, to determine whether TMLP adequately considered

risk minimization, the Department reviews whether flexibility and diversity issues, among others, are included in the Company's least-cost planning to meet the overall objective of risk minimization.

i. Description of TMLP's Process

TMLP addressed risk minimization by employing multiple supply scenarios, including evaluating the performance of its least-cost resource plan based on the impacts of two percent annual increases or decreases in the long-term price of oil and related fuels, compared to its base case assumptions (Exhs. TMLP-1, at 92, and DPU-26). Similarly, the Company conducted sensitivity analyses on its load growth forecasts, using a base case and high and low load growth scenarios whose annual growth rates deviated one percent from the base case load growth rate (Exhs. TMLP-1, at 93-94, and DPU-6-5). Moreover, TMLP analyzed 72 scenarios in which load growth and fuel prices varied simultaneously from its base case assumptions (RR DPU-33). TMLP also analyzed scenarios in which weather varied from base case assumptions (Exh. TMLP-4).

TMLP incorporated risk features into its supply-side RFPs and screening processes through the following criteria: (1) price risk -- which favors those proposals in which the price escalators are not subject to sharp and unpredictable changes; (2) front-loading risk of a supply-side option; (3) project viability factors; and (4) fuel diversity (Exhs. TMLP-5, at 15, TMLP-1, at 80-82, and DPU-34, at 6-13). Similarly, TMLP incorporated risk features into its analysis of DSM options, specifically rating measures and technologies for their economic, technical, and financial risk (Exhs. TMLP-5, at 15, and TMLP-1, at 44-48). TMLP contends that risk

minimization was important in its evaluation of options (TMLP Brief at 25).

TMLP stated that it takes steps to minimize risks, including most favored nation ("MFN") clauses²¹ in the TEC contract, three alternative price provisions in the BFI contracts,²² payment only for delivered energy in the TEC and BFI contracts, and in-house controlled DSM projects (Exh. TMLP-5, at 15-16; TMLP Brief at 26-27, 46-49). TMLP also noted that several of its contracts, accounting for 30 percent of TMLP's energy requirements and 16 percent of its costs, have fixed prices or fixed price escalation rates, and thus are not subject to major upward fuel price risk (Tr. 3, at 74-76; RR AG-12).

TMLP emphasizes that it sought to diversify its fuel mix in order to minimize its risks, particularly away from fuels whose supply can be interrupted or curtailed, or whose price can change rapidly (TMLP Brief at 26, citing Tr. 1, at 80).²³ The Company stated that its 1995 mix of

²¹ An MFN clause allows a buyer to obtain more favorable terms offered to any subsequent buyer.

²² The options are described in detail in Section III.C.1., below, which reviews the BFI Contracts.

²³ The previous review of TMLP's supply plan was conducted by the Siting Council. Taunton Municipal Lighting Plant, 15 DOMSC, 169, 178-186 (1986). In that review, the Siting Council addressed TMLP's need for supply diversity, largely in recognition of TMLP's oil dependence. Id. As a means of achieving greater supply diversity, the Siting Council recommended that TMLP actively pursue a particular waste-to-energy project. Id. at 182-183. In addition, at that time, the Siting Council required TMLP to: (1) pursue sales of the mainly oil-fired Cleary 9 unit; (2) institute methods to encourage economic cogeneration; and (3) consider conservation and load management as an integral component of its supply plan. Id. at 182-184.

energy sources is 44 percent gas, 39 percent oil, 10 percent nuclear, and 7 percent hydro (Exh. TMLP-5, at 16). With the addition of the BFI and TEC contracts, as well as the purchase from NEP, its mix of energy sources in 2000 would be 15 percent gas, 15 percent oil, 9 percent nuclear, 6 percent hydro, 9 percent biomass, 31 percent coal, and 14 percent non-fuel-specific purchases from other systems, significantly increasing the fuel diversity of its resources (Exh. DPU 7-26). TMLP also contends that it has increased the number of sources (including NEP, BFI, and TEC) from which it acquires energy (TMLP Brief at 27-28).

ii. Attorney General's Position

The Attorney General contends that the TEC contract adds to TMLP's risk rather than reducing it (Attorney General Brief at 7-8). The Attorney General argues that if TEC is built, TMLP's dependence on coal would exceed its dependence on gas and oil combined, which would make the Company overly reliant on coal (id. at 7, citing Tr. 3, at 74). The Attorney General observes that TMLP has reduced its risk from fuel price escalation by using contracts that have fixed prices or fixed escalation rates, which the Attorney General asserts satisfies TMLP's diversity needs (id. at 8, citing Tr. 3, at 78, and RR AG-12). The Attorney General maintains that the TEC contract increases TMLP's risk, since TMLP is still the only buyer²⁴ from TEC, legal roadblocks remain to TEC's construction, and TEC will not come on-line for several years (id. at 8). Further, the Attorney General raises "serious questions about the ownership of the facility in the future," contending that it is questionable whether TEC will have any owner at all, raising

²⁴ TMLP has contracted to buy 30 MW of TEC's 150 MW output, or 20 percent (Exhs. TMLP-1, at 68, and TMLP-7, at 1).

concerns about its long-term viability (id., citing TMLP Brief at 44, and RR DPU-35).

iii. Analysis and Findings

The record in this case indicates that TMLP's methodology employed multiple demand scenarios based on a range of fuel costs and load growth projections, including simultaneous variations on the base case for fuel costs and load growth, as well as unusual weather. TMLP utilized three supply-side RFPs, which ensured reliance on third-party transactions, securing a market response while avoiding self-dealing concerns. The proposals resulting from the supply-side RFPs and the identified DSM options were rated according to criteria that directly addressed the issue of risk minimization in a number of areas. TMLP also has structured some of its contracts to shield itself from poor plant operation and fuel price changes, including the contracts for TEC and the BFI landfills.

In regard to diversity, the Company's supply planning process incorporates the ability to identify, screen, and evaluate a diverse set of technologies encompassing a range of fuel types, size increments, capacity factors, and costs. Further, TMLP's actual resource plan, including the TEC and BFI contracts, will significantly increase the diversity of its fuel mix, which is generally accepted as an appropriate means of reducing risk. Finally, with respect to flexibility, the Department notes that TMLP revised its resource plan four times in the recent past. TMLP's revisions encompassed activities such as the buy-out of a high-cost contract and the acquisition of supply from biomass facilities.

The Attorney General has raised concerns about the long-term viability of the TEC project, many of which are addressed in Section III.B, below, which reviews the TEC contract.

The Department notes that even if TEC is not viable, TMLP's risk is not large, since TMLP has many other choices in the current regional market for power. With respect to concerns raised by the Attorney General regarding the contribution to fuel diversity of the TEC project, the Department notes that TMLP's heaviest reliance on any one fuel would fall from 44 percent reliance on gas in 1995 to 31 percent reliance on coal in the year 2000. In addition, TMLP's resource plan would decrease reliance on oil by more than half, and would add biomass and system power supplies.

Accordingly, based on its analysis of TMLP's risk minimization methodology, diversity, and flexibility, the Department finds that TMLP's methodology for evaluating resource options adequately considers minimization of risk.

d. Environmental Impacts

Both the Department and the Siting Board, pursuant to G.L. c. 164, §§ 69H and 69I, consider whether an electric company has adequately considered the environmental impacts and benefits of different resource options. 1995 BELD Decision at 32; 1993 EUA Decision at 60; 1989 BECo Decision, 18 DOMSC at 270.

i. Description of TMLP's Process and Results

TMLP maintains that it has included environmental considerations in its resource selection process in a number of significant ways (TMLP Brief at 28). TMLP claims that it included environmental factors in its screening analysis, by rating projects based on their permits and licenses obtained (id., citing RR DPU-26). TMLP claimed that it rejected two of the top finishers in its 1992 RFP because those units would not be able to meet Clean Air Act requirements (RR

DPU-30). TMLP is modifying its own Cleary units to lower emissions of nitrogen oxide pollutants (Exh. DPU-7-8). TMLP stated that the three most recent additions to its resource plan -- TEC, BFI, and NEP -- have pricing mechanisms which shield TMLP from environmental compliance costs (RR DPU-26).

TMLP asserted that it has selected resources which provide direct environmental benefits (Exh. TMLP-6, at 9). TMLP stated that its BFI landfill gas projects convert methane, a potent greenhouse gas, to carbon dioxide, a much less potent one, which serves to ameliorate possible environmental damages from global warming (*id.*).²⁵ TMLP also maintained that the BFI projects would destroy non-methane organic compounds which would otherwise be emitted from the landfills, thus eliminating precursors to ground-level ozone, a health-damaging pollutant whose level exceeds Clean Air Act standards in eastern Massachusetts (Exh. TMLP-6, at 9). TMLP contended that its substantial commitment to DSM resources has a benign effect on the environment, and that its overall policy toward DSM is influenced by environmental objectives (Exh. DPU-47; RR DPU-26). TMLP added that it was the first municipal utility in Massachusetts to participate in the Massachusetts Photovoltaics ("PVs")²⁶ for Utilities working group and that it submitted an unsuccessful proposal to the U.S. Department of Energy for partial funding of a 4.9 kilowatt PV-assisted lighting system for one of five interested TMLP business customers (Exhs. TMLP-5, at 9, and DPU-7-29; Tr. 3, at 15-17).

²⁵ TMLP also claimed that greenhouse effects due to TMLP's share of TEC's carbon dioxide emissions would be more than fully offset by the BFI projects (Exh. TMLP-6, at 10; RR DPU-28).

²⁶ PVs are also known as solar cells, which produce useful energy without emitting air pollutants.

ii. Attorney General's Position

The Attorney General concurs with TMLP's assessment of environmental benefits resulting from the BFI projects, which he notes would reduce fossil-fueled emissions in New England and mitigate the greenhouse effect (Attorney General Brief at 8-9). The Attorney General contends that TMLP did not claim similar benefits for the TEC contract (*id.* at 9). The Attorney General notes that the BFI contract would protect TMLP ratepayers from the cost of more stringent environmental regulations in the future, but maintains that the revised arrangements upon which TEC's most recent price offer is based, which include ownership by a municipal entity, might well leave TMLP ratepayers exposed to such costs for TEC (*id.*, citing Exh. TMLP-6, at 10, and Tr. 3, at 48 and 71).

iii. Analysis and Findings

The record indicates that TMLP's methodology addressed environmental impacts in several ways. First, TMLP developed and applied explicit "permitting status" and "site acquisition" criteria. Second, TMLP rejected two projects that were unable to demonstrate compliance with Clean Air Act standards. Third, TMLP has selected the BFI projects and DSM resources, both of which provide direct environmental benefits. Fourth, TMLP has structured its contracts to avoid the risks of future compliance costs.²⁷ Fifth, TMLP has pursued the acquisition of photovoltaic technology. Accordingly, the Department finds that TMLP's resource evaluation process has adequately considered the environmental impacts and benefits of different resource options.

²⁷ As discussed in Section III.B, below, if TMLP assumes part ownership in TEC, it could be exposed to risks from future environmental compliance costs for TEC.

Specifically regarding the TEC project, the Attorney General contends that, because TMLP could become an owner of TEC, TMLP may ultimately become exposed to environmental compliance costs associated with TEC. The Department addresses the environmental risk component of the TEC project in its review of the TEC contract in Section III.B, below.

The Department notes that electric companies must anticipate reasonably foreseeable environmental control requirements with cost implications for ratepayers. Boston Edison Company, D.P.U. 95-1-CC at 13-14 (1995). The Department encourages TMLP to continue to address the likelihood of environmental costs as a major component of its supply planning process.

e. Conclusion on Resource Evaluation Process

The Department has found that TMLP has adequately incorporated consideration of cost, risk minimization, and environmental impacts in its supply planning process. The record demonstrates that TMLP has screened and evaluated supply-side and demand-side resources in parallel and on an equal basis, resulting in substantial commitments to each type of resource, facilitating diversity among both supply-side and demand-side resources. Based on the foregoing, the Department finds that TMLP (1) has developed a resource evaluation process that fully evaluates all resource options, including the treatment of all resource options on an equal footing, and (2) has applied its resource evaluation process to all resource options.

3. Conclusions on Least-Cost Supply

The Department has found that TMLP identified a reasonable range of resource options. The Department has found that TMLP (1) has developed a resource evaluation process that fully

evaluates all resource options, including the treatment of all resource options on an equal footing, and (2) has applied its resource evaluation process to all resource options.

Accordingly, the Department finds that TMLP has established that its supply plan ensures a least-cost energy supply.

E. Adequacy of the Supply Plan

1. Adequacy of the Supply Plan in the Short Run

a. Definition of the Short Run

In the past, the short run has been defined for all electric companies as four years from the date of the final hearing or the final evidentiary response in a case, whichever is later. 1995 BELD Decision at 37; 1993 EUA Decision at 38; 1989 BECo Decision, 18 DOMSC at 225, n.10. TMLP's final hearing was held on April 25, 1995, and the final evidentiary response was submitted on July 7, 1995. Consistent with previous decisions, the short run in this proceeding extends from the summer of 1995 through the winter of 1998-1999.

b. Base Case Supply Plan

TMLP indicated that, in order to develop its base case adequacy analysis, it derived an updated energy and peak load forecast ("updated base case forecast") from the corresponding forecast approved by the Department in the TMLP Phase I Order (Exhs. DPU-6-8 and DPU-7-13). Specifically, TMLP stated that it applied the annual growth rates for total energy requirements for the years 1995 to 2002 as approved in the TMLP Phase I Order to the actual 1994 energy requirement of 526,862 MWH (Exh. DPU-7-13). TMLP noted that the actual 1994 energy requirement was 4.5 percent greater than the forecasted energy requirement of 504,080

MWH approved in the Phase I review (id.). As further support for its adjustment, TMLP indicated that it reran its forecast model based on updated energy and economic data ("model rerun forecast"), which showed a modeled 1994 energy requirement about equal to the actual level, but showed even higher levels of future energy and peak load than those in the updated base case forecast over all years of the forecast period (RR DPU-22).²⁸

The Company's base case adequacy analysis compares TMLP's projected resource capability to its capability responsibility over the years 1995 through 1998-1999 (see Table 1, attached). The analysis indicates that, under its updated base case forecast, TMLP projected short-run capability surpluses above its reserve margin, ranging from 4.7 MW in 1995 to 23.4 MW in 1997, 4.0 percent and 20.3 percent respectively, during summer peak periods.²⁹

Accordingly, the Department finds that TMLP's base case supply plan contains adequate resources to meet its projected requirements in the short run.

²⁸ TMLP indicated that projected annual peak levels would be 1.5 to 4.6 percent higher under the model rerun forecast than under the updated base case forecast (RR DPU-22).

²⁹ Although TMLP included the 7.6 MW purchase of power under the BFI contracts as a resource in its supply plan beginning in winter 1996-1997, TMLP also presented a comparison of its resource capability and capability responsibility assuming the BFI contracts would provide 75 percent of their nominal capacity -- that is 5.7 MW (Exh. DPU-6-8). TMLP indicated that the inclusion on a discounted basis of new resources, such as the BFI projects, is intended to reflect in a probabilistic fashion the possibility that power from such projects would not be available as planned (Tr. 1, at 40-42). TMLP's analysis, which incorporated the discounted 5.7 MW capacity for the BFI contracts, indicated surpluses for the years 1996 to 1998 that are 1.9 MW smaller than those shown in Table 1.

c. Short-Run Contingency Analysis

i. Description

In order to establish adequacy in the short run, a company must establish that it can meet its forecasted needs under a reasonable range of contingencies. 1995 BELD Decision at 38; 1993 EUA Decision at 38; 1992 BELD Decision, 24 DOMSC at 40.

The Company asserted that its supply plan, which includes additions of the NEP contract in winter 1995-1996 and the BFI contracts in winter 1996-1997, provides sufficient capacity to meet any one of a range of identified contingencies through the end of 1999 (TMLP Brief at 17-18). The Company further asserted that its supply plan provides sufficient capacity to meet a range of identified contingencies, considered together, through the end of the short-run planning horizon in winter 1998-1999 (id. at 18).

In support, TMLP identified two contingencies which could impact short-run adequacy: (1) a contingency based on a high load growth scenario ("high load growth contingency"), and (2) a contingency based on a 50 percent reduction in DSM savings from load control relative to planned amounts ("50 percent DSM contingency") (TMLP Brief at 18, citing RRs DPU-23 and DPU-33).³⁰ As part of the Department's adequacy review, we herein consider the larger of TMLP's contingencies, the high load growth contingency, for purposes of a single-contingency analysis, and the 50 percent DSM contingency combined with the high load growth contingency

³⁰ Mr. Seavey testified that, recently, TMLP has been reviewing the status of the Maine Yankee nuclear plant, from which TMLP purchases 4.6 MW under a long-term agreement, as a possible supply contingency beginning in winter 1997-1998 (Tr. 1, at 34-36; TMLP Brief at 18-19). TMLP did not identify any other supply-side contingencies it has included or is considering including in its contingency analysis.

for purposes of a double-contingency analysis.

TMLP stated that it developed its high load growth contingency by adding one percent to the projected annual growth rate for each forecast year (Exh. DPU-6-5).³¹ TMLP applied its high load growth adjustment to the updated base case forecast and the model rerun forecast, in order to reflect recent increases in the underlying growth trend (RR DPU-33; Exh. DPU-6-5). Utilizing the Company's model rerun forecast, which represents the most recent and highest forecast, the high load growth contingency analysis indicates that:

(1) TMLP's supply capability in summer 1995 would show a small deficit of 0.7 MW, or 0.5 percent, below its capability responsibility level including reserve margin; and (2) TMLP's supply capability during summer peak periods from 1996 to 1998 would show surpluses above its reserve margin, ranging from 4.6 MW in 1998 to 8.3 MW in 1997, 3.5 percent and 6.4 percent of TMLP's summer peak load, respectively (see Table 2, attached).

To develop the 50 percent DSM contingency, TMLP assumed that the annual increases in DSM above the 1994 level would be half those projected in its supply plan, which resulted in an upward adjustment to capability responsibility of 0.1 MW in 1995 increasing to 1.7 MW in 1998 (RR DPU-23; Exh. DPU-6-8). The double-contingency analysis, combining the 50 percent DSM contingency with the high load growth contingency, indicates that: (1) TMLP's supply capability in summer 1995 would again show a deficit of 0.7 MW, or 0.6 percent, below its capability

³¹ TMLP also analyzed its supply adequacy based on: (1) the expected-value forecast of weather-normalized peak load that is consistent with 90 percent reliability (i.e., peak load forecast for which there is a ten percent probability of actual peak load exceeding forecast peak load in a given year based on weather and load variability); and (2) a peak load scenario reflecting fuel price sensitivity (Exh. DPU-6-8; RR DPU-33).

responsibility level including reserve margin; and (2) TMLP's supply capability during summer peak periods from 1996 to 1998 would show surpluses above its reserve margin, ranging from 2.9 MW in 1998 to 7.1 MW in 1997, 2.1 percent and 5.4 percent respectively (see Table 3, attached).

With respect to the potential small deficits prior to the planned November 1995 start-up of the NEP contract, TMLP indicated that it has planned to fulfill a capacity need of approximately 1.0 MW in summer 1995 (Exh. DPU-6-13). TMLP stated that it could fulfill such a capacity need by purchasing capacity and/or energy on the short-term daily, monthly or seasonal market at 2.5¢ to 3.0¢ per KWH (id.).

ii. Analysis and Findings

In the past, the Department and Siting Council have accepted short-run contingency analyses that (1) identified possible changes in an electric company's supply resources or in its capability responsibility, and (2) addressed the effects of such changes on the company's supply plan adequacy in the context of single and double contingencies, as well as multiple contingencies. 1995 BELD Decision at 41; 1993 EUA Decision at 40; Nantucket Electric Company, 21 DOMSC 208, 275-276 (1991). Although companies' contingency analyses generally have included supply-side contingencies, a recent company forecast presented contingencies that were based exclusively on load growth, not on the ability of a planned resource to come on line. 1995 BELD Decision at 41. In that review, the Department recognized that the nature of the energy market has changed, that the petitioner had chosen to meet its supply utilizing existing resources, and that the petitioner's selection of demand-side contingencies was appropriate. Id.

Here, as in the 1995 BELD Decision, TMLP has identified high load growth and reduced DSM scenarios as the most important short-run contingencies for its adequacy analysis.

However, TMLP's supply forecast shows that it plans to add two new resources to its supply plan in the short run, one of which is a power purchase from a new resource -- the two-unit BFI landfill recovery project.

The Department notes that TMLP attempted to reflect any uncertainty associated with the planned purchases of BFI project power by presenting a base case adequacy analysis that included the BFI contracts on a discounted basis -- at a level of 5.7 MW, or 75 percent of the planned 7.6 MW purchase (see Section II.E.1.b, n. 28, above). However, while TMLP represented the contingency of the unavailability of the BFI projects by discounting their capacity by 25 percent, an actual contingency involving the resource likely would involve the unavailability of one or both of the planned BFI units -- a reduction of 50 percent or 100 percent of the planned 7.6 MW purchase. Given that an important purpose of the contingency analysis is to identify steps a company might need to take to address an actual contingency, the Department notes that generally it is more useful to present such a contingency as a discrete capacity reduction that is likely to occur, rather than a probabilistic representation of a range of possible capacity reductions.

Nonetheless, the Department notes that the 7.6 MW purchase of BFI project power, although significant for a system of TMLP's size, is comparable to the high load growth contingency in terms of the extent of its potential impact on supply adequacy. The Department recognizes that, given the extent of and the year-to-year fluctuations in TMLP's rate of load

growth in recent years, it may well be appropriate for TMLP to focus greater attention on a high load growth contingency than on a contingency based on its planned purchase of BFI project power. At the same time, given the size of the BFI power purchase, the Department notes that it might have been appropriate for TMLP to consider the unavailability of the BFI contracts as part of a double contingency, in addition to or in lieu of the 50 percent DSM contingency.³²

TMLP has demonstrated that it could reasonably address the small potential supply deficit in summer 1995, and that it has adequate supply in each of the remaining years of the short-run period, while reflecting resource reductions due to the effects of load growth and DSM uncertainties. Thus, TMLP has demonstrated that it can meet its projected requirements in the short run in the event of (1) high load growth and (2) high load growth combined with a 50 percent reduction in DSM.

Accordingly, the Department finds that TMLP's supply plan contains adequate resources to meet its projected requirements in the short run under a reasonable range of contingencies.

2. Adequacy of the Supply Plan in the Long Run

TMLP's long-run planning period is the remaining forecast horizon beyond the short run, and extends from the summer of 1999 through the winter of 2002-2003.

As discussed in Section II.A, above, the Department requires an electric company to

³² The Department notes that, considered together with the high load growth contingency, the unavailability of one BFI unit would result in no double-contingency deficit in the short run, but that high load growth and the unavailability of both BFI units would result in a double-contingency deficit of 3.0 MW in summer 1998 (see Table 2, attached). Because the BFI power purchase is planned to commence in December 1996, we further note that TMLP would have nearly one and a half years to acquire alternative supplies for summer 1998, should the BFI projects not come on line as planned (Exh. TMLP-6, Updates to Attachments A and B at 4).

establish adequacy in the long-run by demonstrating that its supply planning process can identify and fully evaluate a reasonable range of resource options on a continuing basis, while allowing sufficient time for the company to make appropriate supply decisions to ensure adequate cost-effective energy and power resources over the forecast period. 1995 BELD Decision at 42; 1993 EUA Decision at 35; 1992 BELD Decision, 24 DOMSC at

34-35. The Department has found that TMLP identified a reasonable range of resource options. In addition, the Department has found that TMLP's planning process fully evaluates all resource options on an equal footing.

Accordingly, the Department finds that TMLP's supply planning process ensures adequate resources to meet its projected requirements in the long run.

3. Conclusion on Adequacy of the Supply Plan

The Department has found that (1) TMLP's base case supply plan contains adequate resources to meet its projected requirements in the short run, (2) TMLP's supply plan contains adequate resources to meet its projected requirements in the short run under a reasonable range of contingencies, and (3) TMLP's supply planning process ensures adequate resources to meet its projected requirements in the long run. Accordingly, the Department finds that TMLP's supply plan ensures adequate resources to meet its projected requirements throughout the forecast period.

F. Conclusions on the Supply Plan

The Department has found that TMLP's supply plan is likely to ensure a least-cost energy supply. The Department also has found that TMLP's supply plan ensures adequate resources to

meet its projected requirements throughout the forecast period. The Department has further found that TMLP has complied with Conditions Three, Four, and Five of the previous review of the TMLP supply plan.

Accordingly, the Department hereby APPROVES TMLP's supply plan.

The Department directs TMLP to file its next demand forecast and supply plan two years from the date of this Order.

III. CONTRACT REVIEW

A. Standard of Review

Pursuant to G.L. c. 164, § 56D, the Department established a standard of review for jurisdictional municipal power purchase contracts in Newbay. In Newbay, at 19, the Department found that contracts shown to be cost-effective or not otherwise contrary to the public interest merit approval under § 56D. Specifically, the Department found that it would be appropriate to approve a contract (A) that contains provisions to protect ratepayers, such as performance guarantees, buy out provisions, milestones as appropriate, and risk reduction measures, and (B) which is (1) consistent with a current approved forecast/supply plan, or (2) the result of a current competitive solicitation which is open to all bidders, or (3) otherwise supported by a demonstration of economic superiority using current supply- and demand-side alternatives, or (4) not otherwise contrary to the public interest. Id. at 22. See Chicopee at 2-3; Wellesley Municipal Light Plant Electric Supply and Peak Shaving Agreement with Wellesley College, EC 94-21 (1994).

B. TEC Contract

1. Description

On January 31, 1991, TMLP executed a 20-year contract ("TEC Contract") to purchase 30 MW of the output of the TEC power plant from the developer, SCE (Exh. DPU-14, at 1-2).³³ TMLP stated that the TEC Contract was the result of a 1989 coal-only RFP, that the TEC Contract contains numerous ratepayer protections, and that the TEC Contract price was cost-effective (TMLP Brief at 42-43, 54). TMLP also indicated that more recent, and more attractive, price offers had been received, but that these were not formally accepted by TMLP, and therefore the TEC Contract has not been amended to reflect a lower price³⁴ (Exhs. DPU-1-17 Update and DPU-3-7 Update; RR DPU-35; Tr. 2, at 38-40).

TMLP stated that the TEC Contract contains a number of measures designed to protect ratepayers (Exh. DPU-14, at 17, 22-28, 35, 38, 43-44, 78). Specifically, these include: (1) milestones; (2) two MFN clauses (Articles VI, Section C(1), and XXI); (3) performance guarantees; and (4) other risk reduction measures (id.; Exh. TMLP-1, at 105). TMLP noted that if construction has not begun by September 15, 1996, TMLP may cancel the contract (Exh. DPU-14, at 17; Tr. 3, at 66). TMLP stated that the two MFN clauses entitle it to the same price and other terms that any future buyer of TEC energy and capacity may be offered (Exh. DPU-14, at 44, 78). TMLP pointed out that, to guarantee TEC's performance, TEC's "equivalent availability

³³ In addition, TMLP and SCE negotiated two side agreements (Exh. TMLP-1, at 105; RR DPU-40). First, TMLP agreed to lease a site to TEC starting at \$1.1 million per year, with the price to rise with inflation (Exh. TMLP-1, at 105). Second, TMLP has an option to purchase its share of the project when the contract expires (id.; RR DPU-40).

³⁴ However, the Company used the lower April 1995 price offer in its economic comparisons and its supply plan (TMLP Brief at 53-54, citing RRs DPU-37, DPU-42, and DPU-43).

factor" must be maintained at contract levels or TMLP may hire its own engineer at the operator's expense to cure the problem (id. at 28). TMLP identified four other risk reduction measures: (1) TEC's dispatchability;³⁵ (2) TMLP's right to review and approve the architect/engineer ("A-E") and the O&M contractors; (3) payment by TMLP only after TEC begins operation; and (4) reserve funds to limit TMLP's financial risk during TEC's construction, operation, and decommissioning (id. at 22-28, 35, 38, 43).

TMLP performed two cost-effectiveness tests on the TEC Contract price (Exhs. TMLP-1, at 83-86, and DPU-17). First, TMLP compared the TEC Contract price (11.0¢ per KWH levelized in 1995 dollars based on a 1996 in-service date) to the prices of the six top-ranked projects identified by screening projects from its 1990 RFP (Exhs. TMLP-1, at 83-86, and DPU-14, at App. H). That comparison indicated that only TEC was below TMLP's avoided cost, and that a 30 MW purchase of TEC was the optimal size (Exh. TMLP-1, at 73).³⁶ Two years later, TMLP compared the TEC Contract price to prices of the six top-ranked projects from its 1992 RFP (Exh. DPU-17).³⁷ TMLP reported that the TEC Contract had a lower cost than any of those

³⁵ A dispatchable power plant is not operated when a cheaper alternative is available to meet a given load, which saves money for the buyer.

³⁶ The analysis showed a 20-year cost of \$156 million (in 1991 dollars), a B/C ratio of 1.24, and a 13-year "payback period" or period until the cumulative savings of buying from TEC turned positive (Exhs. TMLP-1, at 88, and DPU-14 at App. H).

³⁷ This analysis, using the same TEC Contract price but with different fuel price projections, showed a 20-year cost of \$162 million, a B/C ratio of 1.20, and a 13-year payback period (Exh. DPU-17). TMLP projected the costs over a 20-year period beginning in 1998 to reflect a delayed in-service date (id.).

six projects (id.).³⁸

Distinct from the TEC Contract price, TMLP presented two separate price offers for electricity from TEC, each successively lower (Exhs. DPU-7-27 and DPU-3-7 Update; RRs DPU-35 and DPU-37). TMLP presented the first offer to the Department on March 16, 1995, as spreadsheet updates to two earlier information responses (Exhs. DPU-1-17 and DPU-3-7). TMLP stated that SCE made the offer in a document submitted to several municipal utilities, and TMLP was told that the pricing in that offer would apply to TMLP as well (Tr. 2, at 49). TMLP's projected price for electricity from TEC, based on the March 1995 price offer and updated economic assumptions, was 5.75¢ per KWH levelized in 1995 dollars, reflecting an in-service date delayed by four years to 2000³⁹ (Exhs. DPU-7-27, DPU-3-7, and TMLP-7, at 19).⁴⁰

TMLP presented a second price offer as a record response on April 26, 1995, consisting of an offer letter from SCE, dated April 24, 1995, with attached price projections (RR DPU-35).

³⁸ One landfill gas project had a slightly lower price, but TMLP's screening process portrayed it as much inferior in other respects, so it was not in the group of six top-ranked projects which were compared to TEC (Exh. DPU-34). Bids from Merrimack 1 and 2, which were among the six top-ranked projects compared to TEC, had higher B/C ratios, but TMLP stated that they were not lower in absolute cost than TEC (Exh. DPU-17). TMLP added that Merrimack 1 and 2 were eliminated from further consideration because they would not meet Clean Air Act requirements (RR DPU-30). Further, TMLP did not include the second highest-ranked project in the comparison group, because the offer was for only five years (Exh. DPU-34; RR DPU-30).

³⁹ TMLP used its discount rate rather than an inflation rate to convert from 2000 dollars to 1995 dollars (RR DPU-37). For consistency within this case only, the Department uses the same practice herein.

⁴⁰ TMLP's analysis of the March 1995 presentation showed a 20-year cost of \$143 million (in 1995 dollars), a B/C ratio of 1.16, and an 11-year payback period (Exh. DPU-1-17).

The projected price was 4.56¢ per KWH levelized in 1995 dollars,⁴¹ based largely on "SCE's decision to give up its private ownership in the facility to a municipal entity"⁴² (RRs DPU-35 and DPU-37). As a key reason for its reduced price, SCE cited the tax savings from municipal ownership (RR DPU-35). SCE said that actual prices for electricity will depend on future fuel prices, general inflation, and the project's capital structure and tax-exempt interest rates at the time of financial closing (*id.*).

TMLP compared TEC's costs, using the April 1995 price offer, against four generic alternatives (RRs DPU-37, DPU-42, and DPU-43).⁴³ Specifically, TMLP compared TEC to (1) a generic gas-fired combined cycle ("GFCC") unit similar to the proposed Berkshire Power Development Inc. ("Berkshire") project;⁴⁴ (2) a generic GFCC plant using NEPOOL GTF assumptions; (3) a plant like Berkshire but assuming no transmission costs;⁴⁵ and (4) a plant like

⁴¹ TMLP's analysis of the April 1995 offer showed a 20-year cost of \$121 million, a B/C ratio of 1.41, and a 4-year payback period (Exh. DPU-1-17 second Update).

⁴² TMLP identified four possible financing mechanisms which may be consistent with the "municipal entity" specified by SCE: (1) direct ownership of a project share by TMLP using general obligation bonds; (2) direct ownership of a project share by TMLP of a NEPOOL-planned unit, using revenue bonds pursuant to Chapter 164A; (3) financing by the Massachusetts Municipal Wholesale Electric Company ("MMWEC"), pursuant to Chapter 775; and (4) joint ownership by public and private participants (RR DPU-44).

⁴³ The benefits to TMLP of the annual lease payments from TEC, which reduce TEC's price to TMLP by about 10 percent, were included in all of TMLP's recent cost analyses (RRs DPU-37, DPU-42, and DPU-43).

⁴⁴ Berkshire Power Development, Inc. recently filed a petition with the Siting Board to construct a 252 MW natural gas fired generating facility in Agawam. This petition, which is still pending, has been docketed as EFSB 95-1.

⁴⁵ No transmission costs would be incurred if, like TEC, the GFCC unit were sited in Taunton (RR DPU-42).

Berkshire, but using different gas and coal price assumptions, a scenario which also lowered TEC's price⁴⁶ (RRs DPU-37, DPU-42, and DPU-43). TMLP's analysis showed levelized costs for the four generic GFCC alternatives of 4.84¢, 6.17¢, 4.52¢, and 3.914¢ per KWH, respectively, in 1995 dollars (RRs DPU-37, DPU-42, and DPU-43). Thus, purchasing electricity from TEC at the April 1995 price was projected to cost six percent less than from a GFCC like Berkshire, 26 percent less than from a generic GFCC with NEPOOL assumptions, one percent more than from a GFCC like Berkshire with no transmission cost, and 0.1 percent less than from a GFCC like Berkshire using lower fuel price assumptions (RRs DPU-37, DPU-42, and DPU-43).

Despite the foregoing offers, only the original, highest levelized price of 11cents per KWH (in 1995 dollars) is represented in the TEC Contract (Tr. 2, at 38-40). TMLP stated that it has not formally accepted the lower price offers and the TEC Contract has not been amended to incorporate either of the recent price offers (id.). Therefore, the TEC Contract that is before the Department for approval does not include either the March or the April 1995 price offers, but instead contains the original levelized price of 11cents per KWH (id.).

TMLP contended that because of the MFN clauses and because of the way the market works, TMLP would receive a price at least as low as the April 1995 price proposal (id. at 39-40). In particular, TMLP claimed that TEC would not be built without participation by other buyers, and that SCE's ability to attract buyers depends on pricing terms as low as or lower than

⁴⁶ The comparison assumed that real gas commodity prices remain flat and real coal prices decline one percent per year, consistent with price history over the last 15 to 20 years and some price forecasts (RRs DPU-32 and DPU-43; Tr. 3, at 122-125). The price of power from TEC decreases in this scenario from 4.56¢ to 3.909¢ per KWH levelized (RR DPU-43).

the April 1995 offer (id.).

2. Attorney General's Position

The Attorney General raises a number of concerns regarding the TEC Contract, largely focused on uncertainties surrounding the project (Attorney General Brief at 1-12). Specifically, the Attorney General: (1) questions the viability of the project under its proposed municipally-funded arrangement; (2) maintains that commitment to TEC should not be made at this time due to uncertainty of future energy prices; and (3) argues that purchase of electricity from TEC compromises TMLP's adequacy and cost objectives, and undercuts TMLP's diversity, risk, and environmental goals (id. at 2, 4, 7-12).

The Attorney General argues that SCE is abandoning its ownership in TEC to an unspecified entity, so that TMLP would be contracting for power with an unknown and uncertain owner (id. at 10). He cautions the Department against approving a contract where the project has uncertain or unknown ownership (id. at 10-12). He argues that with more than 75 percent of its output unsold, TEC is not a viable project and TMLP should not rely on it (id. at 3-4, 12). The Attorney General contends that TEC's owner, "whoever that may be," cannot demonstrate viability or procure financing for its project without a significantly higher level of sales than the 30 MW that has been sold thus far (id.). Furthermore, he asserts that greater sales are required to meet the Siting Board's need criterion (id. at 3). See Silver City Energy Limited Partnership, 3 DOMSB 1, 411 (1994) ("Silver City Decision").⁴⁷ In short, he contends that TMLP should seek

⁴⁷ The Department notes that the Siting Board's Silver City Decision approving TEC was appealed to the Supreme Judicial Court ("SJC") by the Attorney General and others. That appeal has been stayed pending further review of the Silver City Decision by the Siting Board in light of the SJC's decisions in Point of Pines Association, Inc. v. Energy

energy sources more certain than TEC, particularly DSM resources (id. at 4, 7).

The Attorney General observes that there is no way to predict accurately what energy prices or resource availability will be several years from now (id. at 4). He notes that under the March 1995 price offer, TEC would not produce annual savings until 2005, its fifth year of operation, and that TEC's cumulative net value will not turn positive until its eleventh year of operation (id. at 6, citing Tr. 2, at 58, and Tr. 3, at 65). He argues that these factors suggest greater risk than if power were purchased from existing generators (id.). He argues that by 2000, TEC's scheduled in-service date, other power purchase contracts and DSM resources may have shown themselves to be economically superior (id. at 7).

The Attorney General contends that TMLP's resource diversity will be negatively impacted with TEC included (id. at 7-8). He claims that the TEC Contract will make TMLP more dependent on coal than it is on gas and oil combined, increasing TMLP's risks (id.). He reiterates his concern that with uncertain ownership, no other buyers, and legal roadblocks,⁴⁸ TMLP may not come on-line at all, raising a concern about TEC's viability (id. at 8). The Attorney General also maintains that TMLP failed to quantify any environmental benefits from the TEC Contract (id. at 9). In addition, he contends that TMLP may become the owner or part-owner of TEC⁴⁹ and in that case TMLP would no longer be insulated from future environmental

Facilities Siting Board, 419 Mass. 281 (1995) and Attorney General v. Energy Facilities Siting Board, 419 Mass. 1003 (1995).

⁴⁸ The Attorney General states that the Siting Board must still determine, in light of remands by the SJC, whether Massachusetts has a need for TEC's electricity, and that the Siting Board's earlier condition for approval of TEC called for power purchase agreements for at least 75 percent of TEC's output, including 25 percent from RFPs subject to Department review (Attorney General Brief at 3-4).

compliance costs (id. at 9-10).

3. TMLP's Position

TMLP argues that it has met each requirement in the Department's standard of review and therefore the TEC Contract should be approved (TMLP Brief at 46-57). First, TMLP cites TEC Contract provisions that offer a measure of ratepayer protection, such as milestones, MFN clauses, lease payments, performance standards, and TMLP approval of the A-E and O&M contractors (id. at 46-49). Second, TMLP states that the TEC Contract is the result of an RFP, and that the TEC Contract compared favorably to offers from the 1990 and 1992 RFPs (id. at 50-52). Third, TMLP states that TEC is consistent with its supply plan, because a series of analyses have repeatedly demonstrated benefits from the TEC Contract, supporting the adequacy, diversity, and low cost objectives of its supply plan (id. at 54-55). Fourth, based on the MFN clauses in the TEC Contract and the April 1995 price offer, TMLP argues that its analyses show that TEC is economically competitive with or superior to state-of-the-art GFCC alternatives under a variety of assumptions (TMLP Brief at 53, citing RRs DPU-37, DPU-42, and DPU-43). TMLP also claims that TEC is superior to the latest power supply offers in the marketplace (TMLP Brief at 54, citing Exh. AG-1-1). Fifth, for the reasons stated above, TMLP contends that the TEC Contract is not otherwise contrary to the public interest (id. at 57).

TMLP responds to the Attorney General's concerns about uncertain ownership of TEC by asserting that SCE, and each of SCE's present owners,⁵⁰ is and will continue to be an integral part

⁴⁹ The Attorney General further argues that if TMLP becomes a full- or part-owner of TEC, TMLP must resubmit TEC as a TMLP-owned generation source and amend its filing before the Siting Board (Attorney General Brief at 11-12).

of TEC (TMLP Reply Brief at 22-23). TMLP contends that financing TEC through a municipal entity will not make TMLP an owner or financier of TEC, nor will such financing confer on TMLP any ownership liability associated with TEC (id. at 24). TMLP adds that the Department has approved financings for municipal light plant entities when the ownership has been changing, citing MMWEC Orders issued in 1981 and 1985 (id. at 25, n.15).

Responding to the Attorney General's concerns about project viability in general and Siting Board approval in particular, TMLP argues that TEC was approved by the Siting Board (id. at 9-10). TMLP asserts that the Siting Board concluded that TEC would be viable if certain conditions were met, likely resulting in a reliable long-term source of power (id., citing Silver City Decision at 223 and Exh. DPU-12). Addressing the Attorney General's concern with the lack of contracts for TEC's remaining 120 MW, TMLP states that the Siting Board gave TEC the opportunity to secure additional contracts before the revised in-service date of 2000 (id. at 10, n.6).

TMLP notes that the future is always uncertain and that utilities and the Department routinely make decisions based on projections of the future (id. at 12). Thus, TMLP rejects the Attorney General's concerns regarding the economic uncertainty of TEC (id. at 12-13). TMLP reaffirms its view that reliance on coal is beneficial, since oil and gas have experienced significant price fluctuations and increases (id. at 19-20). In response to the Attorney General's environmental concerns, TMLP asserts that the Siting Board recognized that TEC would produce

⁵⁰ TMLP identified subsidiaries of Pacific Gas & Electric, Baltimore Gas & Electric, Bechtel Enterprises, and Cogeneration Service Corporation as the present owners of SCE (TMLP Reply Brief at 22).

air quality benefits in New England through displacement of more polluting existing generating plants (*id.* at 18, citing Silver City Decision at 115-118). TMLP also maintains that its TEC Contract protects TMLP's ratepayers from any costs associated with future environmental regulations because TEC's pricing methodology does not allow for a pass-through of future environmental costs to TMLP (*id.* at 18-19).

4. Analysis and Findings

The Department's analysis will first address the April 1995 offer, then the March 1995 offer, and finally the 1991 TEC Contract, itself. First, the most recent and most favorable pricing arrangement -- the April 1995 offer -- is not reflected in the TEC Contract before us. Further, the basis for the April 1995 offer is the formulation of an as-yet unspecified municipal entity which would be eligible to obtain low-cost municipal financing. Second, the March 1995 offer is not reflected in the TEC Contract before us. Third, the TEC Contract price far exceeds those of current supply- and demand-side alternatives.

a. April 1995 Offer

Regarding the April 1995 offer, the Department notes that this offer is contingent on future fuel prices, general inflation rates, actual capital structure, and tax-exempt interest rates. In addition, acquisition of municipal financing is the key to its favorable cost terms. The Department notes that none of the identified owners of TEC are municipal entities that would qualify for such financing, and that a definite owner or owners eligible for such financing has not been identified. The Department notes that if TMLP itself were to participate as an owner -- a possibility suggested by TMLP in Record Response DPU-44 -- such participation could materially alter the

price and risk profile faced by TMLP, depending on the structure and terms of any ownership commitment that might be executed. For example, TMLP could be exposed to future environmental compliance costs. In fact, even without TMLP as an owner, it is not clear what portions of the TEC Contract would be subject to modification as a result of accommodating a new municipal entity assumed by the April 1995 offer.

Thus, the April 1995 offer is a contingent one and subject to additional uncertainties relating to ownership. Without municipal ownership, TMLP will not be able to realize the benefits of the April 1995 offer. Moreover, TMLP has not formally accepted the April 1995 price offer. For the above reasons, the Department finds that the April 1995 price offer does not represent an amendment to the TEC Contract.

b. March 1995 Offer

Similarly, the Department notes that TMLP has not formally accepted the terms of the March 1995 price offer. Thus, the Department finds that the March 1995 price offer also does not represent an amendment to the TEC Contract.⁵¹ Essentially, TMLP would have the Department ratify the 1991 TEC Contract, which reflects neither the pricing terms included in the March 1995 offer nor the pricing or ownership terms contemplated by the April 1995 offer. Accordingly, the Department will now consider the TEC Contract as filed.

c. 1991 TEC Contract

The Department has stated that it would be appropriate to approve municipal power

⁵¹ Moreover, the Department notes that the 5.75¢ per KWH price for electricity from TEC in the March 1995 offer exceeds by more than 0.9¢ per KWH the prices of three current alternatives identified by TMLP in Record Requests DPU-37, DPU-42, and DPU-43.

purchase contracts that meet a two-part standard. The first part of the standard is that such contracts should contain provisions that protect ratepayers. The Department notes that the TEC Contract contains a number of provisions designed to protect ratepayers, including milestone dates with penalties for non-attainment, MFN clauses, performance requirements, dispatchability, payment only for delivered energy and capacity, financial reserve funds, and insulation from future environmental compliance costs. The Department, noting these many provisions, finds that TMLP has shown that the TEC Contract, as filed, provides sufficient protections for TMLP ratepayers.⁵²

The Department now turns to the second part of its standard: whether the contract meets any of the four tests set forth in Newbay. We begin with the first test, by determining whether the TEC Contract is consistent with an approved forecast/supply plan. TMLP asserts that the TEC Contract is consistent with its supply plan, which we approve above (see Section II.F). However, we note that TMLP's supply plan (see Exh. TMLP-5 at 19-20 and TMLP Brief at 24) reflects pricing terms for TEC (4.56¢ per KWH levelized) that are far lower than the 11¢ per KWH price in the TEC Contract, which has not been amended to reflect TMLP's ongoing, dynamic supply planning process. Accordingly, the Department finds that the TEC Contract is not consistent with TMLP's approved supply plan.

⁵² While the Department is reviewing the TEC Contract, as filed, we note that these protections were negotiated with a different set of owners from the proposed future municipal owners. Thus, if new ownership included TMLP, the Department agrees with the Attorney General that the terms in the TEC Contract would be affected. TMLP could lose protections associated with milestone dates, performance guarantees, payment only for energy and capacity delivered, financial reserve funds paid by owners, and insulation from future environmental compliance costs. It is not clear that the remaining provisions would protect ratepayers sufficiently.

The second test requires that a contract be the result of a current competitive solicitation open to all bidders. The TEC Contract is the result of a coal-only RFP in 1989, which is not current and was not open to all bidders. Accordingly, the Department finds that the TEC Contract is not the result of a current competitive solicitation open to all bidders.

The third test requires that a contract be supported by a demonstration of economic superiority using current supply- and demand-side alternatives. The TEC Contract contains a levelized price of about 11¢ per KWH.⁵³ TMLP's analyses show levelized prices of about 4¢ to 6¢ per KWH for several current supply alternatives to TEC. Accordingly, the Department finds that TMLP has not shown that the TEC Contract is economically superior to current supply- and demand-side alternatives.

The fourth test requires that a contract is not otherwise contrary to the public interest. The TEC Contract price is well above current supply- and demand-side alternatives, and therefore contrary to the public interest.⁵⁴ In addition, TMLP has not established other sufficient reasons to show why the TEC Contract is consistent with the public interest. Therefore, the Department finds that the Company has not shown that the TEC Contract is not otherwise contrary to the

⁵³ TMLP argues that the MFN clauses in the TEC Contract make available to TMLP the lowest price which SCE offers in the market. However, the MFN clauses provide no assurance that SCE will either (1) have any other purchasers of power or (2) sell to another power purchaser at a price as low as or lower than the April 1995 offer.

⁵⁴ The Department notes the Attorney General's concerns regarding the TEC Contract. Specifically, the Attorney General: (1) questions the viability of the project under its proposed municipally-funded arrangement; (2) maintains that commitment to TEC should not be made at this time due to uncertainty of future energy prices; and (3) argues that purchase of electricity from TEC compromises TMLP's adequacy and cost objectives, and undercuts TMLP's diversity, risk, and environmental goals (Attorney General's Brief at 1-12).

public interest.

Based on the foregoing, the Department finds that the TEC Contract, as filed, does not meet any of the four tests in the second part of the standard for approval of municipal contracts. Therefore, the Department finds that TMLP has failed to show that the TEC contract is cost-effective or not otherwise contrary to the public interest. Accordingly, the Department does not, at this time, grant TMLP's request for approval of the TEC Contract.

C. BFI Contracts

1. Description

Pursuant to G.L. c. 164, § 56D, TMLP filed executed copies of the BFI contracts representing a total of 7.6 MW from two landfill gas projects, and seeks their approval (Exh. TMLP-6, Updates to Atts. A and B at 5, 37).⁵⁵ TMLP stated that the projects would be located in Halifax and East Bridgewater, that each is 3.8 MW, and that the owner is BFI⁵⁶ (id. at 2-3). TMLP stated that the projected in-service date for both projects is December 1, 1996 (id., Updates to Atts. A and B at 4). TMLP stated that each BFI Contract contains a clause providing

⁵⁵ The Department and intervenors conducted discovery and hearings based on unexecuted versions of the BFI contracts. In the executed versions, the identity of the seller from one project was changed and all dates were one year later. The date changes affected all of the prices, as well as the in-service date and all the other milestone dates. For example, \$46 per MWH was the price of energy for 1996; now it is the price of energy for 1997 (Exh. TMLP-6, Atts. A and B, at 40-41, and Updates to Atts. A and B, at 40-41). Similarly, \$875 per KW was the buyout price for 2011; now it is the buyout price for 2012 (id.). Thus, the economics of the BFI Contracts are affected by the change in dates, and are reflected in updates to discovery provided in response to Department Record Requests (Exhs. DPU-1-17 Update and DPU-1-17 Second Update).

⁵⁶ BFI and its parent corporation have five landfill gas plants in operation and 15 more under development (Exh. TMLP-6, at 10-11). TMLP stated that the parent corporation provides specific financial guarantees for the two BFI projects (id. at 11).

penalties or reduced take in case of sub-par operating performance, as well as an MFN clause (id. at 5-8, and Updates to Atts. A and B at 10-11, 27).

TMLP stated that the BFI Contracts specify a fixed price for delivered energy and no capacity charge (Exh. TMLP-6, at 5-6 and Updates to Atts. A and B at 40). TMLP stated that the price escalates from 4.4¢ per KWH in 1996 to 11.0¢ per KWH in 2016, for a levelized price of 6.4¢ per KWH in 1995 dollars (id., Updates to Atts. A and B at 40; Exh. DPU-3-7). TMLP stated that the price includes transmission charges (Exh. TMLP-6, at 6).

TMLP noted that the BFI Contracts provide future pricing options, at TMLP's discretion, as alternatives to continued purchase at the contract price for the full 20-year contract term (Exh. TMLP-6, at 7). The two options become available to TMLP following nine years of operation (id.). The first option is a capacity purchase of one or both projects for a fixed price (id. at 7).⁵⁷ The second option provides that TMLP may purchase landfill gas for a fixed price, pay another fixed price for O&M, and pay an option fee (id.).⁵⁸

TMLP's analysis of the BFI Contracts' economics indicated B/C ratios ranging from 1.09 to 1.20, depending on which options (if any) are selected, their date of implementation, and which

⁵⁷ The fixed buyout price declines annually from \$1,750 per KW for a buyout in 2006 to \$63 per KW for a buyout in 2016 (Exh. TMLP-6, Updates to Atts. A and B at 41).

⁵⁸ This option involves the same payment as if TMLP were buying the facility, plus (1) purchase of the landfill gas at a fixed price and (2) a flat 3¢ per KWH for O&M (Exh. TMLP-6, Updates to Atts. A and B at 34-35). The fixed gas price rises annually from \$1.22 per million British thermal units ("MMBTU"), if the option is exercised in 2006, to \$1.85 per MMBTU, if the option is exercised in 2016 (id., Update to Att. D at Schedule 5.1). TMLP maintained that it also has the right to supplement the landfill gas at any time during the 20-year contract with other fuel if the landfill gas supplies are insufficient to support the rated capacity (id. at 12).

demand forecast is used (Exhs. DPU-1-17 Update and DPU-1-17 second Update). The 20-year cost for both units combined ranges from \$38 million to \$40 million, while the payback period is zero or two years (id.).

TMLP stated that the addition of landfill gas would help its fuel diversity, increasing the share of renewable energy from seven percent to 17 percent (Exh. TMLP-6, at 11). In addition, TMLP claimed the BFI Contracts would provide a substantial environmental benefit (id. at 9-10). TMLP asserted that the BFI projects' consumption of methane, a powerful greenhouse gas which would otherwise escape to the atmosphere, would offset more than 320,000 tons per year of carbon dioxide emissions (id.). TMLP added that operation of the BFI projects would destroy non-methane organic compounds, which contribute to formation of ground-level ozone, a pollutant whose levels exceed Clean Air Act standards in much of New England, including Massachusetts (id. at 9).

2. Attorney General's Position

The Attorney General supports the addition of the BFI Contracts to TMLP's resource mix, due to the environmental benefits associated with reduced fossil-fueled generation in New England and mitigation of the greenhouse effect (Attorney General Brief at 9).

3. TMLP's Position

TMLP contends that the BFI Contracts contain numerous ratepayer protection measures, including (1) fixed cost pricing, (2) energy-only payments, (3) performance requirements, (4) no transmission risk to TMLP, (5) flexible long-term pricing options, (6) MFN provisions, (7) milestone provisions, (8) options to supplement the fuel as needed, and (9) the experience of the

project developer (TMLP Brief at 32-35, 39-40). TMLP argues that its analyses of the BFI Contracts demonstrate substantial and consistent ratepayer benefits (id. at 36-37). For example, TMLP notes that the BFI Contracts show positive B/C ratios in 53 out of 54 fuel price/load growth scenarios analyzed (id.). TMLP asserts that the BFI Contracts compare favorably to its avoided costs, providing savings compared to avoided costs in every contract year (id. at 37). TMLP cites the role of the BFI facilities in mitigating the greenhouse effect and ameliorating ground-level ozone (id. at 38-39). TMLP argues that the BFI Contracts reduce fuel price risk and environmental compliance risk, and that its fuel diversity is enhanced (id. at 39). TMLP concludes that the BFI Contracts provide a great deal of ratepayer protection, are consistent with its current supply plan, are cost-effective when compared to alternatives, and are consistent with the public interest (id. at 40-41). Accordingly, TMLP maintains that the BFI Contracts should be approved (id. at 41-42).

4. Analysis and Findings

TMLP has shown that the BFI Contracts provide a number of protections for ratepayers, including fixed cost pricing, buyout provisions, and payment only for energy delivered. TMLP has shown that the BFI Contracts are cost-effective under most scenarios, and are below avoided costs in every contract year, demonstrating that the BFI Contracts' price is competitive with current alternatives. Further, TMLP has shown that the BFI Contracts are superior to alternatives in terms of economic risk from price fluctuations, environmental compliance costs, front loading, and buyout options. The Company has shown that the BFI Contracts are consistent with its

supply plan, which we approve above. In addition, the Company has shown that the BFI Contracts are likely to furnish emissions reductions.

Based on the foregoing, the Department finds that the contracts (A) contain numerous provisions to protect ratepayers, and (B) are consistent with a current approved supply plan. Because the Department finds that the BFI Contracts are consistent with a current approved supply plan, the Department need not consider the remaining tests in the second part of the standard of review. Therefore, the Department finds that the BFI Contracts are cost-effective and thereby meet the Department's standard of review for municipal contracts filed pursuant to G.L. c. 164, § 56D. Accordingly, the Department hereby approves the BFI Contracts.

IV. DECISION

The Department hereby APPROVES the 1991 Supply Plan of TMLP for the period 1990-1999. Further, the Department does not, at this time, grant TMLP's request for approval of the TEC Contract. Finally, the Department APPROVES the BFI Contracts.

By Order of the Department,

Mary Clark Webster, Commissioner

Janet Gail Besser, Commissioner

Appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part.

Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. (Sec. 5, Chapter 25, G.L. Ter. Ed., as most recently amended by Chapter 485 of the Acts of 1971).